

HomePage

PlanetPhysics. rg

: *PlanetPhysics.org* Logo -wiki

Welcome to the PlanetPhysics wiki!

- This site is meant to supplement the *Main Noosphere web site* as a place to discuss the organization, physics-related topics, and the like.
 - Now you can access directly the original Noosphere website and also register at *planetphysics.us*. The registration is **FREE** and **allows users to contribute and/or archive their articles and contributions on PlanetPhysics.org websites**.
 - Data Sets uploads will be also accepted up to a maximum size of 40Mb in any of the standard formats such as XLS, PDF, doc, opendoc, ps, html, etc. as a complement and supplement to the *Data Conservancy efforts*, however with any time restrictions placed upon data stored or contributed freely by the users.
 - We are also in the process of setting up an **updated Noosphere instance** that will serve as a transition website to host future content with downwards compatible entries.

Mission of PlanetPhysics.org

- *PlanetPhysics.org is a virtual community which aims to help make physics knowledge more accessible, as well as to further develop physical concepts.*

User Pages

Users: This is a users oriented website, and newphysics contributors and contributions are welcome!

Sandbox

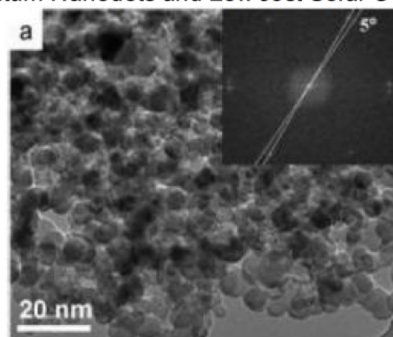
- *Sandbox: Here you can test writing your own draft of an entry and find out the level of your wiki skills.*

Quantum Mechanics and Quantum Field Theories

- *Quantum Mechanics*
- *Concise History of Quantum Mechanics and Related Experiments*



-
- *Quantum News-- "Quantum Dots might Hold the Energy Future"*
 - *Quantum Nanodots and Low-cost Solar Cells*



-
- *Quantum Algebraic Topology*
 - *Non-Abelian Quantum Algebraic Topology*



- *Higher Dimensional Algebra*



- *Quantum Algebra and Symmetry*

- Quantum Geometry



Plasma Physics

- *Plasma Wave Excitation*



-  2005/01/19 19:19
- *Nuclear Fusion animation*
- *University of Wisconsin Nuclear Reactor Tour*
- *Plasma Fusion*



Solar Energy: Science and Technology



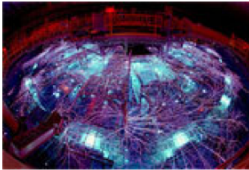
- *Solar Energy*
- 

In the News !

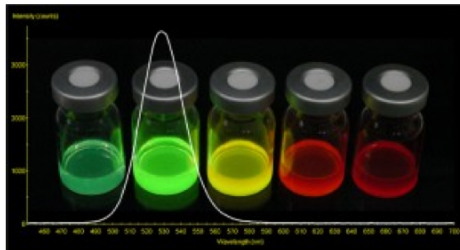
- *AIP Chinese language site launched on June 17th 2011*
- *EAST Xinhua Model*



- *More Physics News*
- The Chinese NF reactor temperature record reported in 2007 : *"50 Million degrees Kelvin"*
- *Z Machine Record*



- *"3.6 Billion degrees C in the lab !"* , reported from Sandia Labs
- *Quantum Dots from NASA*

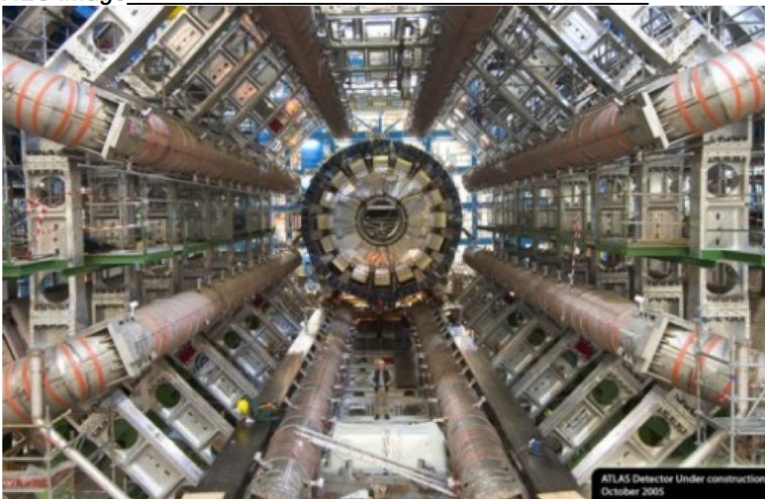


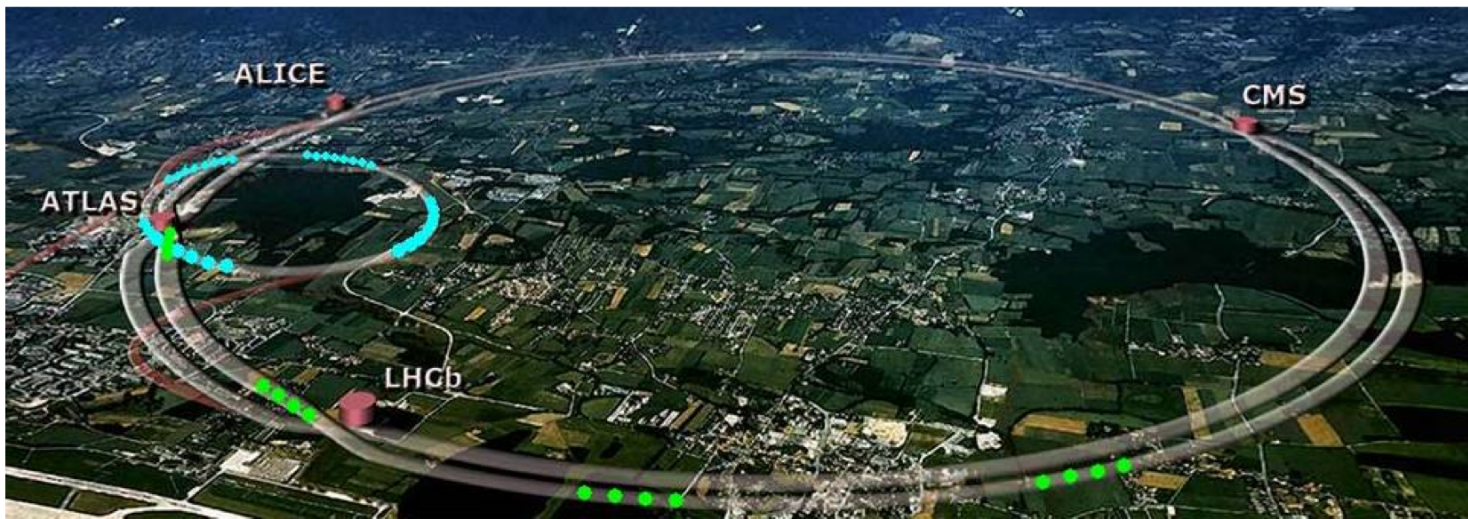
- *Nanophysics, Nanotechnology and Nanomedicine*

High Energy Physics and Particle Accelerators

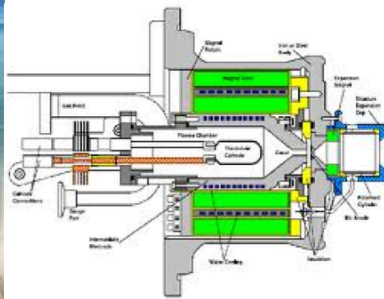
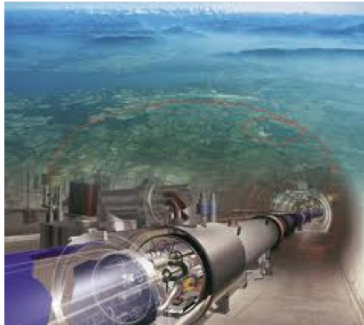


- *Standard Model Animation*
- *HLC Image*





- CERN HLC accelerator



- CERN Perspective
- CERN LHC-Section
 - Electron in an Axial Magnetic Field

Dark Matter

- "Where is the Dark Matter (DM) ?"

Condensed Matter Physics and Solid State Physics

Molecular Physics and Chemical Physics

Classical Mechanics and Fluid Dynamics

- Branches of Classical Physics
- Statics
- Kinematics
- Newtonian Dynamics

Thermodynamics and Statistical Mechanics

- Thermodynamics
 - Principles of Thermodynamics
 - Blackbody Spectrum

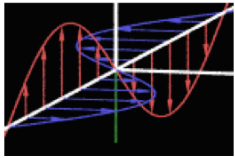
Computational Physics and Molecular Dynamics

- Topics in Computational Physics

Superfluidity and Superconductivity

Electromagnetism, Optics and Spectroscopy

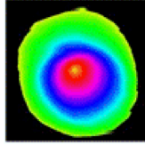
- Spectroscopy Topics
- NIR Spectroscopy wiki



- *Animation website link*



- *Wave Propagation.*
- *The awesome Resonata animation 'Wave Machine': It is so fast that you must slow it down by setting the Depth parameter to at least*



219 !—amazingly beautiful displays: *Resonant screensh27*

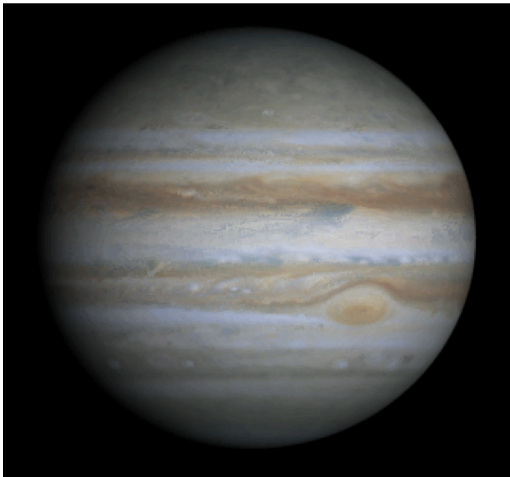
Theoretical and Mathematical Physics

- *Axioms of Physics*
- *Einstein's Relativity Theory*
 - *Einstein's Field Equations in General Relativity*

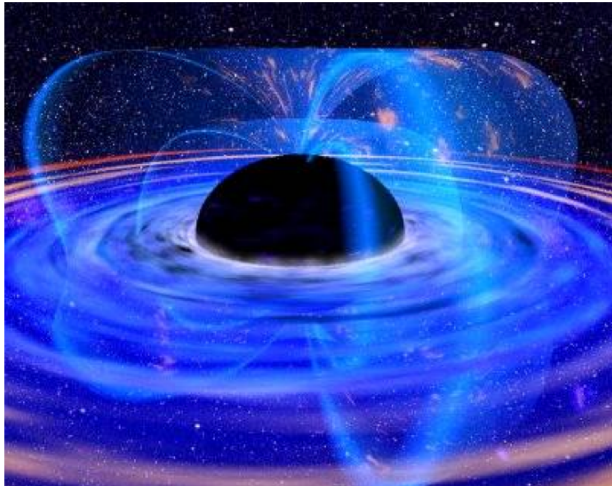


- *Gravitation* —3D-Vector Field Animation at Falstad

Astrophysics



- Jupiter photo **animation** from NASA 's Goddard's Center



- *Pulsar Animation Demo (under your control!)*

Solar Physics

Geophysics

Atomic Physics

- *Atomic and Nuclear Structure*

Nuclear Physics and Engineering

- Nuclear Fission reactors and Nuclear Fusion
- *Chinese News on Fusion*



- - A Chinese mini Model of an 'Artificial Sun' (EAST)
- *Nuclear Magnetic Resonance (NMR)*

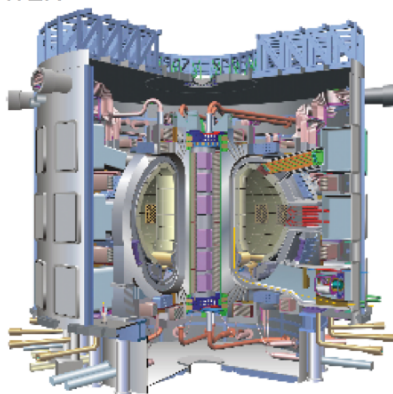
Applied Physics

Medical Physics and Biophysics

"Alternative Energy"

Sustainable Energy Systems

- Solar Power
- Nuclear Fusion Experiments and Experimental Fusion Reactors: JET, NSTX, LTX,
 - JT-60 (Japan Torus),
 - Tokamak Fusion Test Reactor(TFTR), and other tokamaks
 - *ITER*



-
- *Nuclear Fusion News*



- - *Levitated Fusion*
- Wind Generators
- Hybrid Power Generation

Conventional Power Generation

- Hydroelectric Power Generation;
- Geothermal Power Generation;
- Hybrid Transport Systems;

General concepts

- *List of General concepts*
 - *Observable* | *Gravity* | *Light*
 - *Waves & Wave animation*
 - *Harmonic motions Animation*
 - *Temperature* | *Heat*
 - *Electric Charge* | *Electric Field* | *Electron* | *Muon* | *Fermion*
 - *Particle* | *Proton* | *Neutron* | *Neutrino*
 - *Lepton* | *Hadron* | *Boson*
 - *Physical system*:
 - Physical observations Physical quantity
 - Physical experiment
 - Physical state Physical unit Physical theory

Theoretical Concepts and Physical Laws

- *Basic quantities*
- *General Concepts*
- *In Thermodynamics*
- *In Mechanics and Relativity Theories*
 - *Moment of inertia*
- *In Electromagnetism, Heat, etc.*
 - *Equations*
- 
- **Fourier Series and FTs**
- *In Quantum theories*:
 - *Quantum Theory Equations*:
 - *Quantum Hamiltonian operator*
 - *Schrödinger's wave equation*
 - *Heisenberg Uncertainty Principle*
 - *Goldstone theorem*
- *Relational theories*
 - *Categories in Physics*

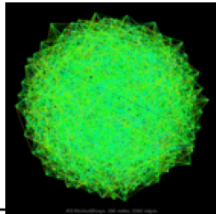
- *Chaotic Dynamics*



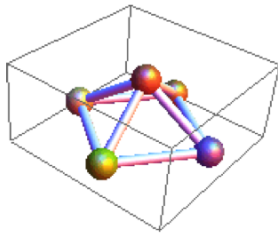
- *Euler's formula*  *Euler Equations-An Animated Illustration*

Web Links to Computational and Software Tools for Physics

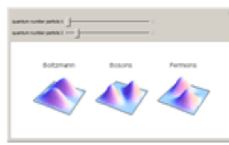
- *Physical Quantities*
- *Units and Measures*



- *Drawing Large Graphs*—
 - *Graph visualization is a way to discover and visualize structures in complex relations*
 - *GraphPlot in Mathematica v. 6.0*
 - *GraphPlot3D*



-
- *Table of Fourier and Generalized Fourier Transforms*
 - *Interactive 2D-FT*
 - *XFT2D: A 2D Fast Fourier Transform-- Wolfram Demo Project*
 - *Fractional Fourier Transform, Wolfram Demo*
- *Table of Laplace Transforms*
 - *Numerical Inversion of the Laplace Transform*
- *Physics Course Assistant application on iPad*
- *"Free Maple Program for Instructors: Maple Adoption Program"*
- *Abstract Algebra in GAP*
- *Maple Program- Introduction*
- *Basics of Programming in Maple*
- *Maple outline*
- *Computational Group Theory*
 - *Exposition of Computational Group Theory*
 - *Algorithms of Representation Theory*
- *GAP- Groups, Algorithms, Programming - a System for Computational Discrete Algebra*
 - *Free GAP Download*
 - *Gap Installation*
- *CREP*
 - *Free CREP Downloads*
- *Link to Wolfram's Mathematica Demonstrations Project: **Links to Selected Mathematica Animations and Demos***
 - -- All demo files require the *Wolfram CDF Player* or *Mathematica Free trial*
 - *Franck-Hertz Experiment*
 - *Charged Particle in a Uniform Magnetic Field*
 - *Diffraction Grating Experiment*
 - *Lyapunov Fractals*
 - *Rosler Attractor*
 - *3D Graphics*
 - *Laplace Equation on a Circle*
 - *Vibrating Circular Membrane*
 - *Damped 3D Lissajous Figures*
 - *Euler Angles: Precession, Nutation, and Spin*
 - *3D Rotation Is Non-Abelian*
 - *Rotational Symmetries of Colored Platonic Solids*
 - *Steady Flow over a Rotating Disk: von Kármán Swirling Flow*
 - *Lorenz Attractor*
 - *Mathematics of Tsunamis*
 - *Cuboctahedron--Zeolite unit cell*
 - *Generalized Arrhenius Functions*
 - *Self-Organization: Idealized Belousov-Zhabotinsky Reaction*
 - *3D Molecular Model of a Mutant of the Human Insulin Molecule*
 - *Quantum Mechanics*
 - *The Photoelectric Effect*
 - *Blackbody Spectrum-- An Interactive Demo*
 - *1D Schrödinger Equation for a Harmonic Oscillator*



- *Wave Functions of Fermions and Bosons--*
- *Animation of Klein-Nishina Calculation for Photon-Electron (Compton) Scattering*
- *Visualizing Atomic Orbitals*
 - *Download*
- *Soliton Trajectories of the mKdV Equation*
- *The Klein Paradox in 1D QED*

- *Feynman's Relativistic Electrodynamics Paradox*
- *Spherical Harmonics by Dr. S. Wolfram*
- *Anharmonic Oscillator Phase Space Trajectories 2D*
- *Interactive demo of the Brillouin Zone of a 2D Square Lattice*
- *BIREP 1978 - 2010 (Archive) Representations of Finite Dimensional Algebras and Quantum Groups at Bielefeld (Germany)*

The PlanetPhysics Collection: Backups of All PlanetPhysics Entries

- All previous Encyclopedia entries are also available here in their original form from the following linked list, generated from the Noosphere v.1.02 snapshot of 01/01/2011, as well as an updated snapshot generated on 06/24/2011.
- Current version of the Encyclopedia and Noosphere at PlanetPhysics.org
- PlanetPhysics's **content is created collaboratively; the main features of PlanetPhysics are:**
 - PlanetPhysics Encyclopedia,
 - *Biographies on PlanetPhysics.org*
 - *Topics on PlanetPhysics.org*
 - *Expositions and Papers— with entries written and reviewed by members,*
 - The Papers section functions also as an **electronic/cyber archive of preprints, published papers and reprints**, as well as:
 - The **Books section**
 - A large number of downloadable physics and mathematical physics books and textbooks:
 - *Books*
 - *PM Encyclopedia Book in 2005 of 36Mb; current contents at 80Mb PDF*
 -  *PM Book Entries*
 - *PM Books Index Page 1; *** PM Books Index Page 2; *** PM Books Index Page 3; *** PM Books Index Page 4*
 - *PM Books Index Page 5; *** PM Books Index Page 6; *** PM Books Index Page 7; *** PM Books Index Page 8*
 - *PM Books Index Page 9:*



- **Active links to all individual book entries**

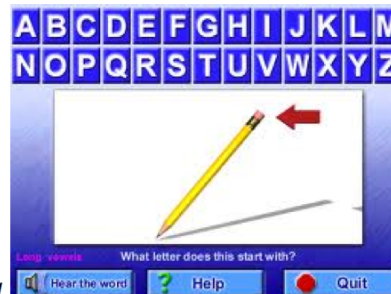
Snapshots

- *Latest Snapshots*
 - *June 24th 2011 Snapshot*
 - *Backup of PlanetPhysics.org from January 01, 2011*
- *PlanetPhysics(redux) Developmental website*

Overview of the Contents of PlanetPhysics

The PlanetPhysics.org Encyclopedia Collection

- *Encyclopedia Entries*



- *Alphabetic listing of Encyclopedia 1.02 as of 01/01/2011*
- *NewNoosphere 1.4 PlanetPhysics Developmental Server: current Encyclopedia entries beginning June 14, 2011*
- *newnoosphere 1.45-Encyclopedia List only, at this time- June 27th, 2011 update*
- *NewNoosphere v.1.5 PlanetMaths Developmental Server: Current Encyclopedia entries beginning June 14, 2011: all modes available*
- *--APS Alphabetical Listings #1*
- *--ScienceWM Alphabetical Listings #2*

- *PlanetMath Encyclopedia entries*
 - *Selected Examples*
- **Overview pages**
 - *Overview of PlanetPhysics Contents: Noosphere v. 1.02*
 - *Noosphere page-- web cached*
 - *Noosphere v.1.02 Overview page cached*
 - *Overview continued with subsections:*
 - *Index of PlanetPhysics Contributors *** Biographies *** Literature *** Basic Physics References*
 - *Table of PlanetPhysics Wiki Contents *** Index; Noosphere; ns-MySQL-all*
 - *Current Summary of Planet Physics Collection*
 - -Special Symbols and Letters in TeX

See also

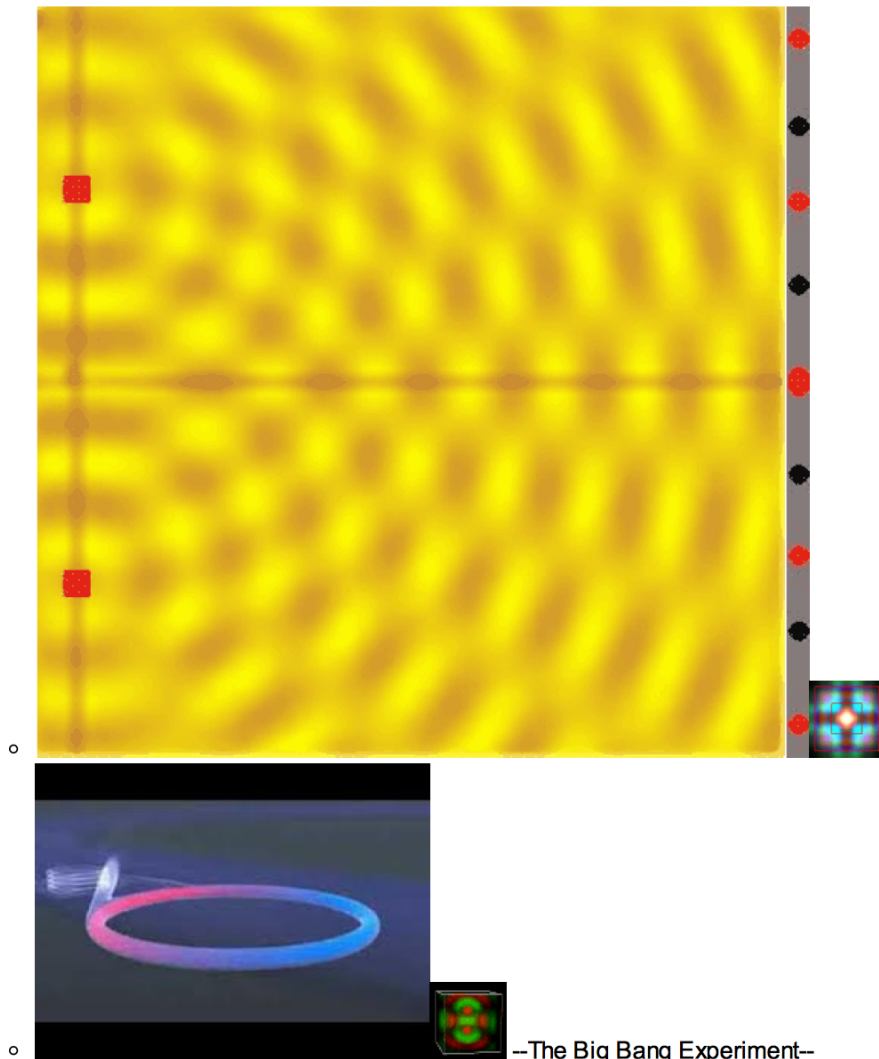
- *Novel Research Institute*
- *PlanetMath*
- *The Global Network of Science Academies*
- *Open Science*

Not Even Wrong !

- *Item 1-Cycle of Time controversy*

Other External Links, page 1

- *AIP.org* is the website of the *American Institute of Physics*
- *IOP.org* The website of the "Institute of Physics"
- *APS.org* The website of the "American Physical Society"
- *Physics Preprint Web Archives* (since October 1996)
- *ScienceWISE--annotation of arXiv by authors*
- *"Big Physics requires Big Maths"*
- *The National Academy of Sciences (NAS)*
- *History of quantum mechanics*
- *PhysOrg.com* and *Physics Newsletter*
- *Modeling Biosystems*
- *Mathematical and Theoretical Physics at IHES*
- *French Academy of Sciences*
- *L'Institut des Hautes Études Scientifiques (IHÉS)*
- *SPS National* is the website of the *American Society of Physics Students*
- *ARA*
- *EPS.org* The website of the *European Physical Society*
- *Physics news*
- *CERN Preprints Document and Preprint Server*
- *Crystallography and Principles of Protein Structure Course (PPS)*
- *AFC-NMR and NIR Microspectroscopy Facility*
- *Mathematical and theoretical biology*
 - *Mathematical Sciences*
- *My Experiment:*



--The Big Bang Experiment--

- *Animation Movie of the Big-Bang High Energy Experiment*

External Links, page 2

... More external links

- **All contents are automatically backed up daily and are generated in TeX;**
 - The TeX preambles suitable for physics and mathematics articles are automatically available to the users when new objects or articles are created online at the *PlanetPhysics.org* websites.
 - The entries are contributed under the terms of the GNU Free Documentation License (FDL) in order to preserve the rights of both the authors and readers in a sensible way.

Categories

- *Category : Research*
 - Web Search-at arXiv: *Categories within Physics*
 - Category:Articles
- Category:Reference
 - Category:Education
 - Category:Encyclopedia
 - Category:Books
- Category:Open
 - Category:Relational
 - Category:Design
 - Category:Repositories and Collaborations for Open Science and Design

PlanetPhysics.org Wiki Entries

- *Wiki Entry List*
- *Wiki HomeP Backup*

Copyright©2011 by PlanetPhysics (with the exception of public domain images)

A non-profit organization at *planetphysics.org* and also at *planetphysics.us*

Web counter

- 

This document was created with Win2PDF available at <http://www.win2pdf.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.
This page will not be added after purchasing Win2PDF.